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CLAIMS

What is claimed is:

- 1 1. An apparatus, comprising:
- a request queue coupled to a memory unit via a memory-sensing device;
- 3 a response queue coupled to the memory-sensing device; and
- 4 an arbiter coupled to said response queue.
 - The apparatus of claim 1, wherein the memory-sensing device comprises redundant circuitry capable of sensing memory in the memory unit substantially simultaneously.
- 1 3. The apparatus of claim 1, wherein said request queue comprises memory to store
 2 more than one request.
- 1 4. The apparatus of claim 3, wherein the memory to store more than one request comprises memory to service more than one request substantially simultaneously.
- 1 5. The apparatus of claim 1, wherein said response queue comprises memory to store data for a response.
- 1 6. The apparatus of claim 1, wherein said arbiter comprises a response arbiter to determine a response to more than one request.
- The apparatus of claim 6, wherein the response arbiter comprises a priority determiner to determine a priority of a response to a request.
- 1 8. The apparatus of claim 1, wherein said arbiter comprises a request arbiter coupled
- 2 to said request queue.

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1	9.	A method, comprising:
2		receiving more than one request for sensing data in a memory unit;
3		sensing data in the memory unit;
4		returning critical data in response to said receiving more than one request;
5		and
6		returning non-critical data.
1	10.	The method of claim 9 wherein said receiving more than one request for sensing
2		data in a memory unit comprises receiving a second transaction before completing
3		a response to a first transaction.
1	11.	The method of claim 9 wherein said receiving more than one request for sensing
2		data in a memory unit comprises receiving a request to read critical data.
1	12.	The method of claim 9 wherein said sensing data in the memory unit comprises
2		determining an order to sense data based on available redundant circuitry.
1	13.	The method of claim 9 wherein said returning critical data comprises interrupting
2		a response to a first request comprising non-critical data to return critical data in
3		response to a second request.
1	14.	The method of claim 9 wherein said returning non-critical data comprises
2		returning non-critical data in accordance with a pre-defined protocol.
1	15.	The method of claim 14 wherein returning non-critical data in accordance with a

pre-defined protocol comprises returning non-critical data in an order based upon 2 3 a priority attached to the more than one request.

pre-defined protocol comprises responding to each request of the more than one

The method of claim 14 wherein returning non-critical data in accordance with a

request with time-sliced burst data.

1	17.	A system, comprising:
2		a virtual-port memory device;
3		a memory controller coupled to said virtual-port memory device; and
4		a host coupled to said memory controller.
1	18.	The system of claim 17, wherein said virtual-port memory device comprises:
2		a request queue coupled to a memory unit via a memory sensing device;
3		a response queue coupled to the memory sensing device; and
4		an arbiter coupled to said response queue.
1	19.	The system of claim 18, wherein the arbiter comprises a response arbiter to
2		determine a response to more than one request.
1	20.	The system of claim 17, wherein said memory controller comprises:
2		a response interpreter coupled to said virtual-port memory device;
3		a host response queue coupled to the response interpreter; and
4		a host request queue coupled to said host.
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21.	A system, comprising:
	a virtual-port memory device coupled to a microprocessor; and
	an input-output device coupled to the microprocessor.

- 1 22. The system of claim 21, wherein said virtual-port memory device comprises:
- a request queue coupled to a memory unit via a memory sensing device;
- a response queue coupled to the memory sensing device; and
- 4 an arbiter coupled to said response queue.
- 1 23. The system of claim 21, wherein said input-output device comprises an antenna device.
- 1 24. The system of claim 21, wherein said input-output device comprises an audio 2 input device and an audio output device.

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1	25.	A machine-readable medium containing instructions, which when executed by a
2		machine, cause said machine to perform operations, comprising:
3		receiving more than one request for sensing data in a memory unit;
4		sensing data in the memory unit;
5		returning critical data in response to said receiving more than one request;
6		and
7		returning non-critical data.
1	26.	The machine-readable medium of claim 25 wherein said receiving more than one
2		request for sensing data in a memory unit comprises receiving a second
3		transaction before completing a response to a first transaction.
1	27.	The machine-readable medium of claim 25 wherein said receiving more than one
2		request for sensing data in a memory unit comprises receiving a request to read
3		critical data.
1	28.	The machine-readable medium of claim 25 wherein said sensing data in the
2		memory unit comprises determining an order to sense data based on available
3		redundant circuitry.
1	29.	The machine-readable medium of claim 25 wherein said returning critical data
2		comprises interrupting a response to a first request comprising non-critical data to
3		return critical data in response to a second request.
1	30.	The method of claim 25 wherein said returning non-critical comprises returning

non-critical data in accordance with a pre-defined protocol.